

## ABSTRACT OF THE DISCLOSURE

Efficient measuring of protein solubility with the use of a precipitating agent as crystallization parameter; and production of a high-quality protein crystal with the use of a solubility curve obtained by the measuring. Protein crystal is disposed, and the surrounding thereof is filled with a protein solution. Not only is the concentration of precipitating agent in the protein solution increased but also the interference fringes of the protein solution around the crystal are observed, and in which of dissolution, growth and equilibrium the condition of crystal resides is judged from the interference fringes. The protein concentration of protein solution is simultaneously measured, and the solubility of protein is determined from the observation results of interference fringes together with the measured protein concentration and precipitating agent concentration. Further, a solubility curve is prepared, and a protein crystal is produced through controlling of supersaturation condition.